

Docket No. 2001-0095-4
USSN10/029,319

Date of Deposit: February 9, 2004

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Sarah J. Briggs

(Typed or Printed Name of Person mailing papers or fees)

Sarah J. Briggs

(Signature of Person mailing papers or fees)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of) Examiner: D. Monbleau
William N. Partlo, et al.)
Serial No.: 10/029,319) Group Art Unit: 2878
Filed: October 17, 2001)
For: IMPROVED FAN FOR GAS DISCHARGE)
LASER)

Mail Stop AF
Commissioner for Patents
Washington, D.C. 20231

Sir:

Remarks

This letter is in response to the Final Office Action mailed December 10, 2003.

A more careful reading of Hofmann indicates that it does not disclose the claimed recitation:

a plurality of blade members ... disposed in an approximate double helix pattern ... the blade members in alternate segments being positioned approximately parallel to each other and at an acute angle with the rotations axis, said acute angle being approximately equal and opposite to said acute angle of blade members in adjacent segments

This embodiment is shown in FIG.s 5, 5A, 5B and 5C. This embodiment is a variation on the embodiment of Hofmann shown in FIG. 2a of Hofmann, and described by Hofmann to be blades that are "spaced substantially evenly about the circumferences [and] offset by a circumferential angle of ϕ relative to blade members 214 of adjacent sections 210." (Col. 5, line 61 – Col. 6, line 1) Thus the embodiment of FIG. 2a of Hofmann

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describes, as Hofmann later states in distinguishing this embodiment from the embodiment shown in FIG. 2c of Hofmann, having an approximate helical shape involving a "stepped circumferential relative offset" from section 210 to section 210 as shown in FIG.s 5-5C.

In describing the embodiment of FIG. 2c, Hofmann notes:

FIG. 2c is a *schematic view*¹ of a skewed or twisted substantially helical blade fan structure 260. ... Twisted blade fan structure 260 is effectively the continuous limit of tangential fan 200, wherein each blade member 264 is partitioned into an infinite number of infinitesimally short sections, having continuous substantially helical relative offset about a rotational axis 270 rather than a stepped circumferential relative offset. Twisted blade fan structure 260 can include full length blade members 264 as shown in FIG. 2c, having either a clockwise or counterclockwise helical twist. (Col. 6, lines 43-55)

Without showing the embodiment in a figure, Hofmann goes on to describe an alternative embodiment to that of FIG. 2c which encompasses:

twisted blade fan structure 260 can include multiple longitudinal sections of blade members 264 having alternatively reversed helical twists, to cancel longitudinal aerodynamic effects. (Col. 6, line 56-60)

Figures 5-5C of the above captioned application clearly show that the claimed "approximate double helix pattern," is also a variation of the embodiment of the "stepped circumferential offset" of FIG. 2a of Hofmann, except that the blades in alternating sections form an "approximate double helix." That is, there is one set of helical blades that are offset from each other by alternating sections wherein, instead of the continuation of the helix as shown in FIG. 2c of Hofmann, there is a blade from a set of alternate section blades forming an opposite helix. This is clearly shown in FIG.s 5-5C of the above captioned application. Similarly, in FIG.s 6-6B there is shown fan blades in alternating sections, neither of which are helical, but the blades are circumferentially offset from each other in the alternating sections so as to form a first set of sections with blades aligned with each other and a second set of sections with blades also aligned with each other, but adjacent sections are offset.

¹ The description of the Drawing describes FIG. 2c as being "isometric," meaning in addition to being

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Applicants submit that Hofmann, with respect to the alternative to FIG.2c, is described in the contest of the two embodiments described, with the flat blades forming an approximate helix due to the substantially constant offset from section to section and the actual helical blades. This has blades from section to section twisting in the same fashion to form a plurality of continuous helixes. The alternative described embodiment is similarly a plurality of blade sections in essentially the same helical structure, but with the blades from section to section simply having "reversed helical twists." That is, the sections forming the approximate or actual helical overall blade shape from one end plate 266 to the other (as shown in FIG. 2c) simply alternate their twist relative to the rotational axis of the fan from clockwise to counterclockwise. That is to say, e.g., the blades 264 in the section between the shown end plate 266 and the first hub member 262 would have the upper surface (as shown in the FIG. for the blades that can be seen) convex and in the next section the similarly pictured blades would have upper surfaces (on the back side of the section as depicted lower surfaces) that are concave. This is the plain meaning of "reversed helical twists".

This is not the same as the claimed "double helix pattern" including "said acute angle being approximately equal and opposite to said acute angle of blade members in adjacent segments ..."

At best, the disclosure of Hofmann is ambiguous and for that reason cannot be relied upon as anticipatory of for purposes of obviousness analysis. See, *In re Metzner*, 164 F.2d 618, 620-21, 76 U.S.P.Q. 119 (C.C.P.A. 1947)

For the above stated reasons, the rejection of the Examiner of claim 20 under 35 U.S.C. §102 (e) in view of Hofmann is improper and the Examiner is respectfully requested to withdraw the rejection of claim 20 and allow claim 20.

In addition the rejection of claim 20 under 35 U.S.C. §102 (e) is not proper because Hofmann does not disclose blades that are "randomized" as that term is used in the claim and described in the Specification (¶32 in the Published Application). The blades in Hofmann (FIG. 2a) are all spaced with a precise circumferential angular offset from section to section to be approximately though not exactly in helical alignment. (Col. 5, line 57 – col. 6, line 4)

"schematic" it is tilted in perspective.

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For the above stated reasons the Examiner's rejection of claim 20 under 35 U.S.C. §102 (e) is not proper and the Examiner is respectfully requested to withdraw the rejection of claim 20 and allow claim 20.

For the same reason that Hofmann is not a proper reference under 365 U.S.C. §102 (e) it is not a proper reference under 35 U.S.C. § 103 (a) and for this reason the Examiner's rejection of claims 1-6 and 9-19 under 35 U.S.C. §103 (a) is not proper and the Examiner is respectfully requested to withdraw the rejection of claims 1-6 and 9-19 and allow claims 1-6 and 9-19.

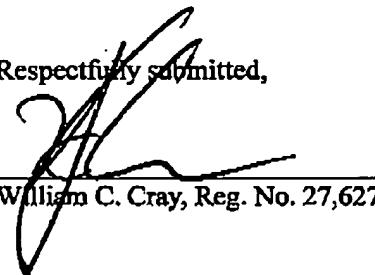
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Conclusions

Claim 1-6 and 9-20 should now be in a condition for allowance and the Examiner is respectfully requested to issue a timely Notice of Allowance for claims 1-6 and 9-20.

Applicants do not believe that any fees or charges are due for the prosecution of this Response, however, in the event that any such charges are due, the commissioner is hereby authorized to charge the Deposit Account of Cymer, Inc., Deposit Account No. 03-4060, for any such fees or charges.

Respectfully submitted,


William C. Cray, Reg. No. 27,627

February 9, 2004
Cymer, Inc.
17075 Thornmint Court
Legal Department - M/S 4-2C
San Diego, California 92127-2413
Telephone: (858) 385-7185
Facsimile: (858) 385-6025